IN-DEPTH INSPECTION REPORT

P.I.N. X051.59

ELEMENT SPECIFIC BRIDGE WORK

B.I.N. 1076620

TEAM LEADER IAN PETERSEN 106776
NYSPE LICENSE #

ASSISTANT TEAM LEADER SEBASTIAN MERCADO

FEATURE CARRIED Grand Central Parkway - Westbound C-D

FEATURE CROSSED Northbound Cross Island Parkway

DATE FIELD WORK BEGAN 1/17/23

DATE FIELD WORK COMPLETED 1/30/23

TABLE OF CONTENTS

DISCLAIMER

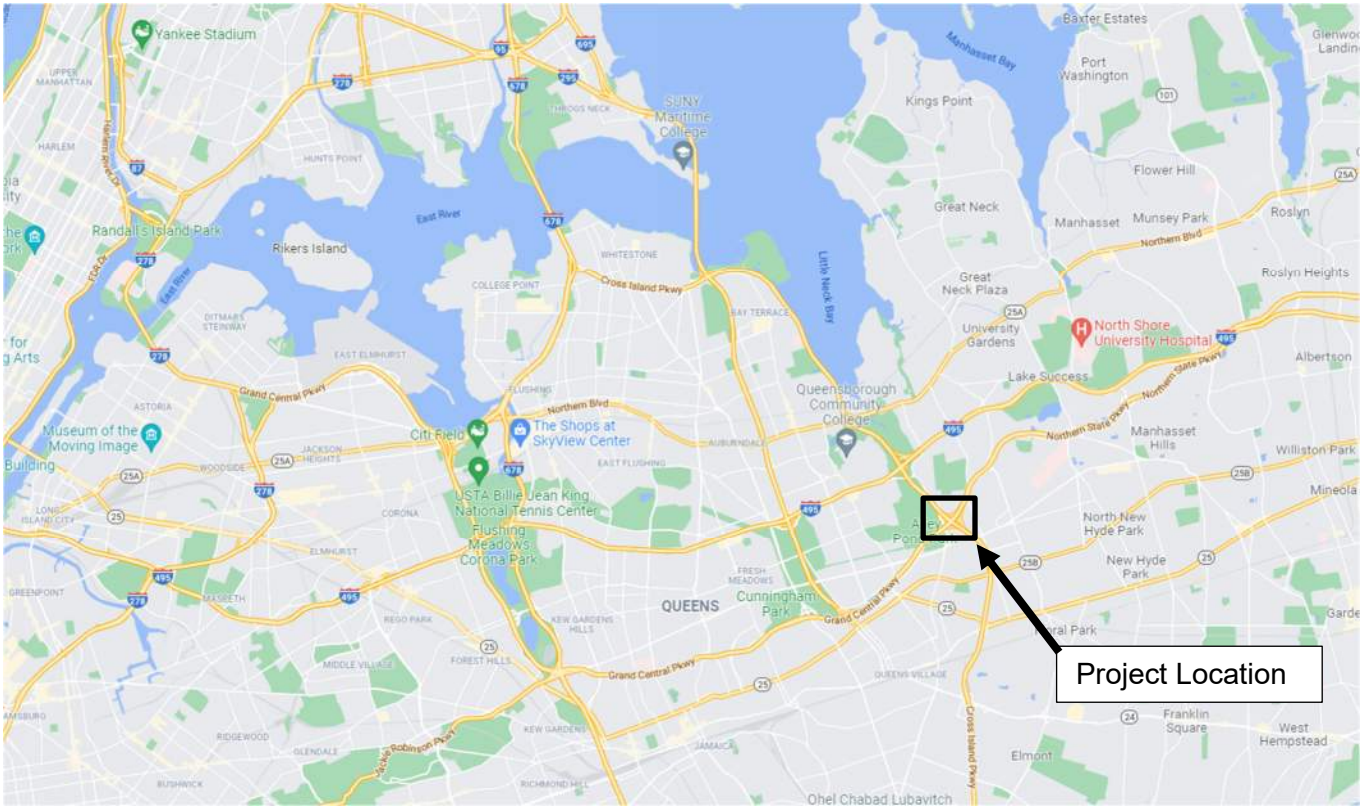
This inspection report is based on data and conditions that were generally applicable as of January 2023 and the conclusions and recommendations herein are therefore applicable only to that timeframe. This report should not be used as the sole basis for the preparation of rehabilitation or repair plans, construction, or remedial action, or as a basis for major capital decisions.

SCOPE OF WORK

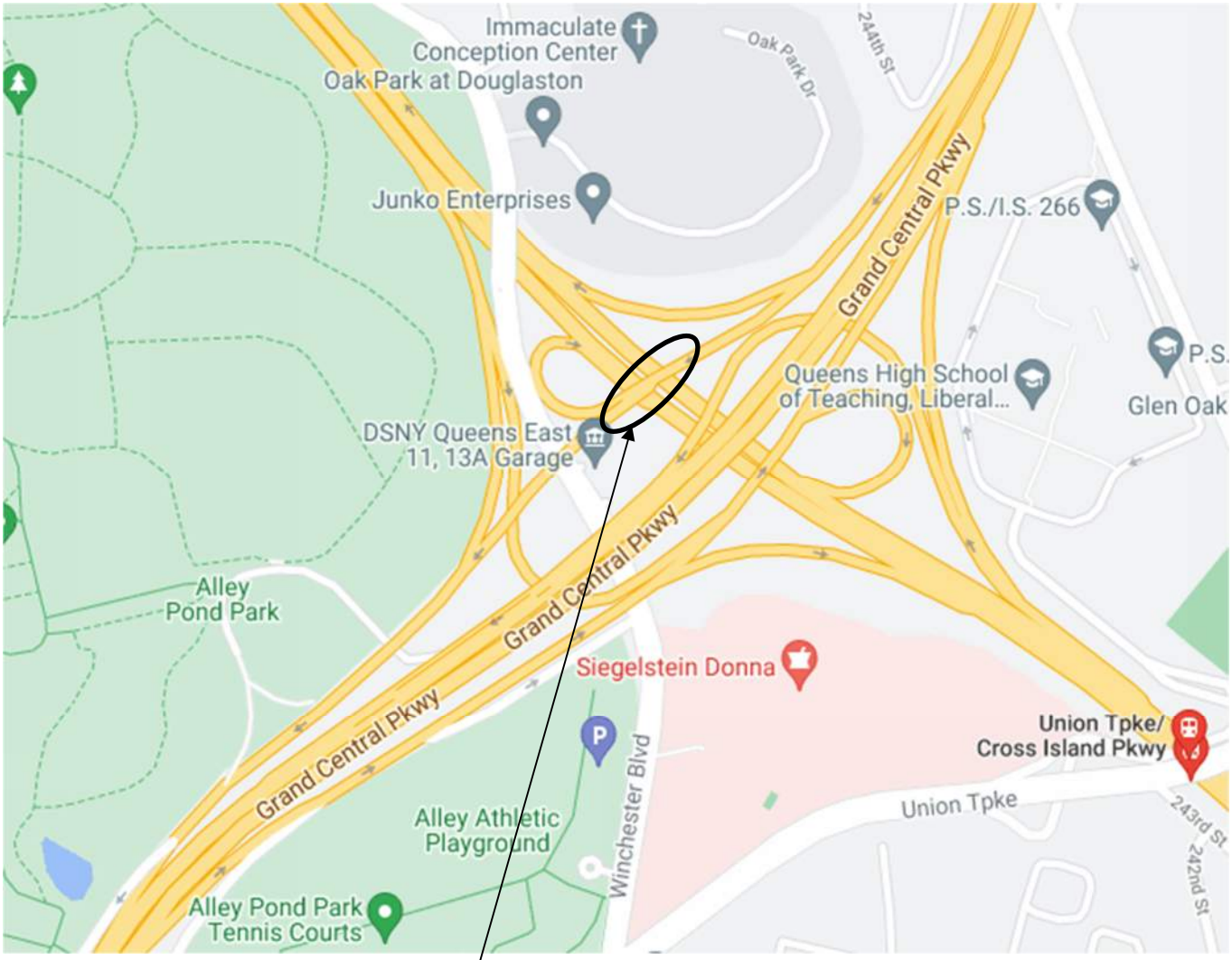
An in-depth inspection has been performed on the following structures: BIN 1076620

The intent of this inspection is to perform a high-quality study detailing the condition of the bridge and to document the findings for easy reference.

PROJECT LOCATION MAP

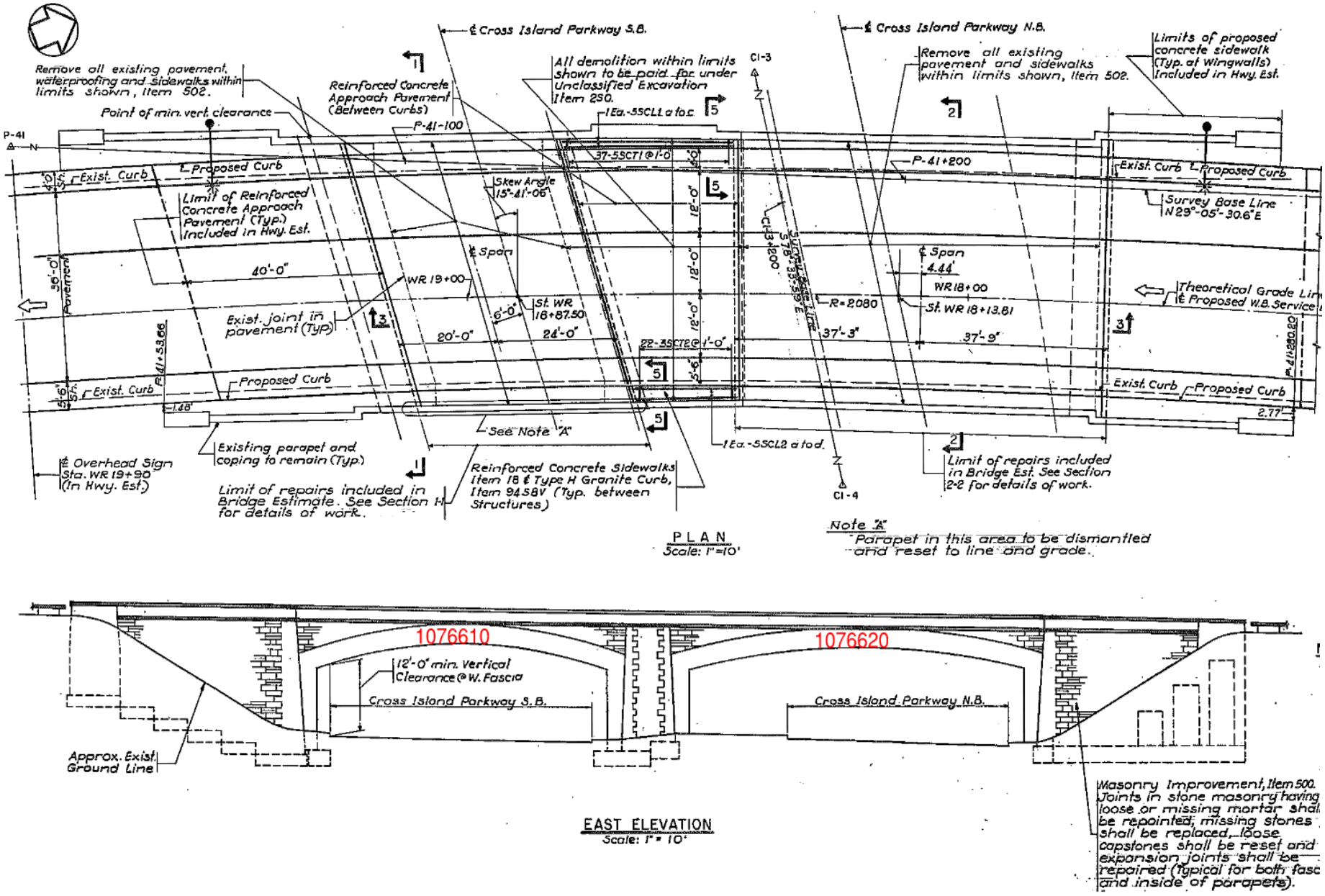


BRIDGE SITE



BIN: 1076620
Grand Central Parkway Westbound C-D
Over Cross Island Parkway

EXISTING BRIDGE SECTION



For Reference Only

STRUCTURE IDENTIFICATION

a.	Bridge Identification Number (BIN):	1076620
b.	Reference Marker:	NA
c.	Region:	NYSDOT Region 11
d.	County:	Queens
e.	Town:	Queens
f.	Feature Carried:	Grand Central Parkway Westbound C - D
g.	Feature Crossed:	Cross Island Parkway

INTRODUCTION

The Grand Central Parkway Westbound C-D bridge was originally constructed in 1939 and underwent rehabilitation in 1972, it carries vehicles over the Cross Island Parkway Northbound in Queens County, New York. The bridge is a single span, concrete, and masonry arch. The span length of the bridge is 73 feet, and the width of the bridge is 55 feet. The bridge carries 3 lanes of Westbound traffic.

An in-depth bridge condition inspection of the underside of deck was performed on January 23 and January 24, 2023, with a top of deck inspection being performed on January 17 and January 30, 2023, by engineers from Michael Baker Engineering, Inc. The bridge was accessed from the ground and bucket truck with work zone traffic control on the Northbound Cross Island Parkway and the Westbound C-D provided by Constar, a subcontractor of the NYSDOT. All substructure, superstructure and approach elements were inspected, photographed, and evaluated for condition and function. A complete description of the inspection findings is included in the Condition Evaluation section of this report.

INSPECTION PERSONNEL

Qualifications (experience, certifications, and training) and responsibilities of bridge inspectors shall be in accordance with Section 165.5. (a)(1) of the Uniform Code of Bridge Inspection and the NBIS.

DATE OF INSPECTION

Date	Time	Inspection Description
1/17/2023	9:00 AM – 2:00PM	Top of Deck left and center lane (Northside)
1/23/2023	10:00 PM – 5:00 AM	Underside of deck over N/B CIP left and center lane
1/24/2023	10:00 PM – 5:00 AM	Underside of deck over N/B CIP right and center lane
1/30/2023	9:00 AM – 2:00PM	Top of Deck left and center lane (Northside)

IN-DEPTH CONDITION DOCUMENTATION

Fascia: Both the North and South Fascia exhibit minor cracks and deterioration along the arch and ring stones. The North side exhibits missing pointing in the West side of fascia with active leaking around 1st ring stone from the Begin (West) Abutment and 4 LF missing pointing on the East side above ring stones 16-19 from the End (East) Abutment, exhibits multiple spalls up to 1 SF in the top of ring stones 9-12 from begin abutment and a 1.5 SF hollow area in ring stone 28 from End abutment. The South side exhibits missing pointing up to 3 LF with heavy efflorescence along the bottom of the arch, a large deterioration above the 6th ring stone from the Begin (West) Abutment, a 2 SF hollow area with active leaking above ring stone 9/10 from the Begin (West) Abutment. (See Photos 1-3)

Abutments: Both the Begin (West) and End (East) abutments have similar geometry and solid backwall with footing founded on earth. There are wingwalls, constructed parallel to the roadway in a U-wall configuration and constructed monolithic with the abutment. The Begin (West) and End (East) abutments are not skewed. The overall length of the Begin (West) and End (East) abutment is 52 feet. The backwall height for both the Begin and End abutments is 11'-0".

Both abutments are still in fair condition and fully functional. The Begin (West) Abutment exhibits a 1.5 SF hollow area approximately 4 feet above the roadway, multiple full height cracks up to 1/16". The End (East) abutment exhibits multiple hollow areas up to 18 SF, multiple cracks up to full height of the abutment and 1/16" width with heavy efflorescence. (See Photos 4-6)

Wingwalls: The wingwalls are about 24 ft. high at both abutments and run approximately parallel to the roadway. They extend approximately 30'-0" on the North side and 20'-0" on the South side for the Begin (West) abutment and 20'-0" from the abutments in both quadrants for the End (East) abutment. The End (East) abutment of bridge 1076610 shares wingwalls with the Begin (West) abutment with the bridge 1706620. The wingwalls are completely solid and in good condition.

Approach Embankment / Drainage: The approach roadway to the bridge is approximately 61 feet in length. There is no evidence of excessive settlement of the embankment or roadway. The roadways appear to drain expediently, and no areas of standing water or localized low areas were observed on the bridge or along either approach.

One drainage catch basin exist along the Southside of the End approach approximately 73 feet East of End joint. Catch basin appears open with heavy debris in area. (See Photo 7)

Approach Pavement / Wearing Surface: The asphalt approach pavement exhibits a 2 SF hollow section in the left lane approximately 54.5 feet East of the End joint, a 2 SF hollow area between the left and center lane and a 2 SF hollow area between the right and middle lane both at the End joint, a 3 SF hollow Area between the left and middle lane approximately 15 feet West of the End joint, a 3.5 SF hollow area between the right and center lane approximately 19 feet East of the end joint, a 2 SF hollow area between the right and middle lane approximately 12 feet East of Begin joint, and a 1 SF hollow area between the right and center lane at the Begin joint. (See Photos 8-9)

Joints: The joint filler on the Begin, middle and End joint is beginning to dry out, deteriorate and fray. The filler in the North parapet exhibits large holes and missing joint filler. (See Photos 10)

Vertical Clearance: Vertical clearance has not changed since the previous inspection report. **See attached vertical clearance in Appendix A.**

Parapets/Railings: The parapets are in fair condition with multiple areas of stone wearing away and areas where pointing is missing up to 10 in length and 5 inches in depth. All signs of railing post impact and have been replaced/ repaired since last inspection. (See Photo 11)

Paint: Paint peeling was noted on the face of the abutments. Paint peeling and paint loss is exhibited over approximately 70% of abutment face. (See Photo 12)

Underside of Arch: Approximately 70 percent of the Underside of the bridge is covered by steel frame shielding. New steel framing and connection have replaced a majority of the old, deteriorated steel mesh and steel mesh connections. The underside exhibits a 32 SF spall with exposed rebar near midspan of the South face, rebar exhibits slight deterioration (less than 10% section loss), spall has been covered with new steel mesh to protect traffic below, a 24 SF hollow area approximately 27 feet East of Begin (West) abutment and 7 feet South of North fascia, a 5 SF hollow area approximately 10 feet South of the North fascia and 6 feet East of the Begin (West) abutment, a 4 SF hollow area 3 feet South of the North fascia and 1 foot East of the Begin (West) abutment, a 4.5 SF hollow area at midspan approximately 33 feet East of the Begin (West) abutment and 6 feet South of the North fascia, and a 6 SF hollow area approximately 13 feet West of the End (East) abutment and 4 feet South of the North Fascia. Underside of North Fascia exhibits heavy accumulation of efflorescence. (See Photos 13-16)

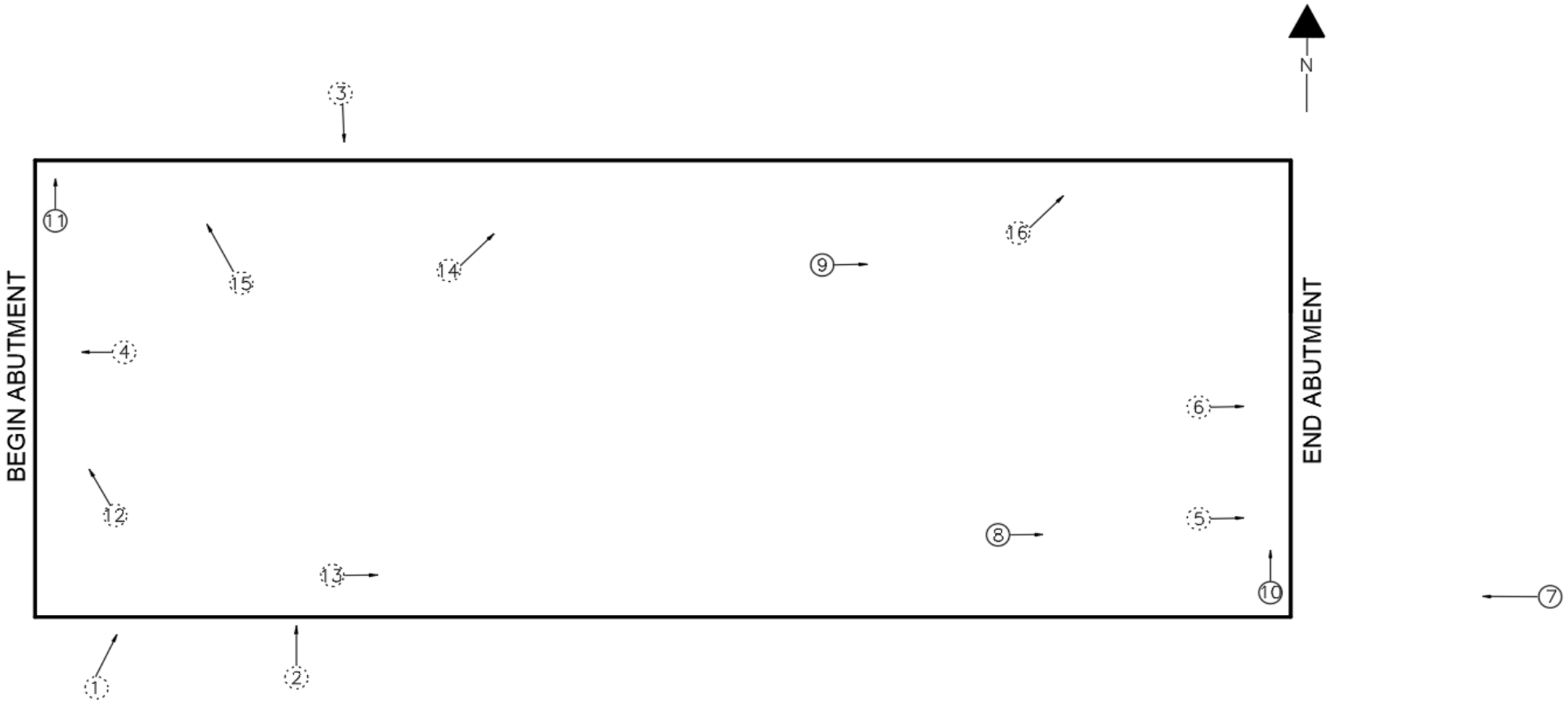
See the Arch Condition Sketch in Appendix A, for detailed locations of deck spalling, cracking and other deterioration.

IN-DEPTH PHOTO DOCUMENTATION

IN-DEPTH INSPECTION PHOTO LOCATION PLAN

Grand Central Parkway Westbound C-D

Inspection Date: 1/17/2023



BIN: 1076620

LEGEND:

◯ - PHOTO TAKEN ABOVE DECK

◌ - PHOTO TAKEN BELOW DECK

PHOTO LOCATION PLAN

(NOT TO SCALE)

B.I.N. 1076620	Grand Central Parkway Westbound C-D	Date: January 17, 2023 Sheet: 1 of 8

PHOTO: 1 **LOCATION:** West side of South Fascia
DESCRIPTION: Heavy efflorescence and 2 SF spall in ring stones
Looking Northeast

PHOTO: 2 **LOCATION:** South fascia ring stone 9 and 10 from Begin abutment
DESCRIPTION: 2 SF spall in top of ring stone with 2 SF hollow area on face
No loose concrete, Looking North

PHOTO: 3 **LOCATION:** North Fascia 9th ring stone from Begin abutment
DESCRIPTION: Multiple 1 SF spalls and cracking with active water leaking Looking Southeast

PHOTO: 4 **LOCATION:** Begin (West) Abutment 18 feet North of South Fascia
DESCRIPTION: Abutment exhibits large crack at ground level with fine Crack that extends full height, Looking West

PHOTO: 5 **LOCATION:** End Abutment near South fascia
DESCRIPTION: Abutment exhibits 18 SF hollow area at ground level
Looking Southeast

PHOTO: 6 **LOCATION:** End Abutment 12 feet North of South fascia
DESCRIPTION: Abutment exhibits full height crack with heavy efflorescence
Looking East

PHOTO: 7 **LOCATION:** Top of deck end approach South side
DESCRIPTION: Catch basin exhibits heavy debris accumulation Looking West

PHOTO: 8 **LOCATION:** Top of deck End approach 15 feet West of End joint
DESCRIPTION: Wearing surface exhibits 3 Sf hollow area between left and Center lane, Looking East

PHOTO: 9 **LOCATION:** Top of deck 19 feet East of Begin joint
DESCRIPTION: Wearing surface exhibits 3.5 SF spall between right and Center lane, Looking East

PHOTO: 10 **LOCATION:** End joint near left lane
DESCRIPTION: Joint filler exhibits fraying and deterioration along joint Looking North

PHOTO: 11 **LOCATION:** North Parapet at Begin joint
DESCRIPTION: Parapet exhibits up to 4-inch loss of joint filler
Looking North

PHOTO: 12 **LOCATION:** Begin Abutment
DESCRIPTION: Abutment exhibits paint peeling and paint loss
Looking Northwest

PHOTO: 13 **LOCATION:** Underside of bridge mid span near South fascia
DESCRIPTION: Underside of deck exhibits 32 SF spall with exposed rebar New metal mesh was installed over spall, Looking East

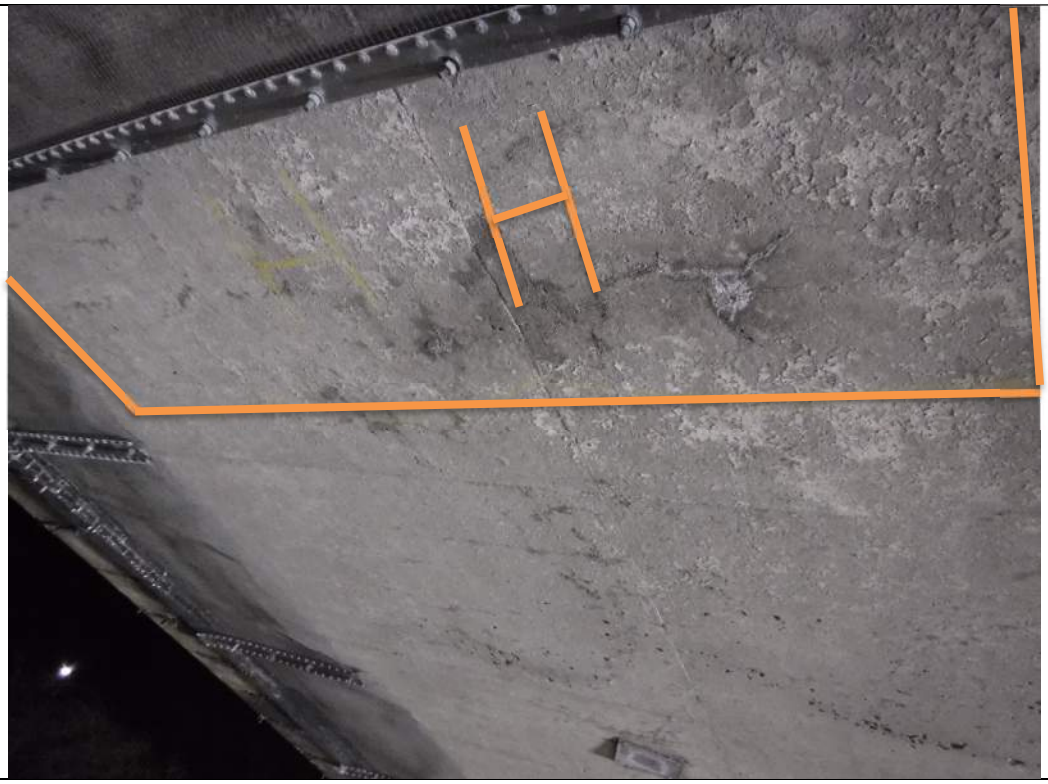


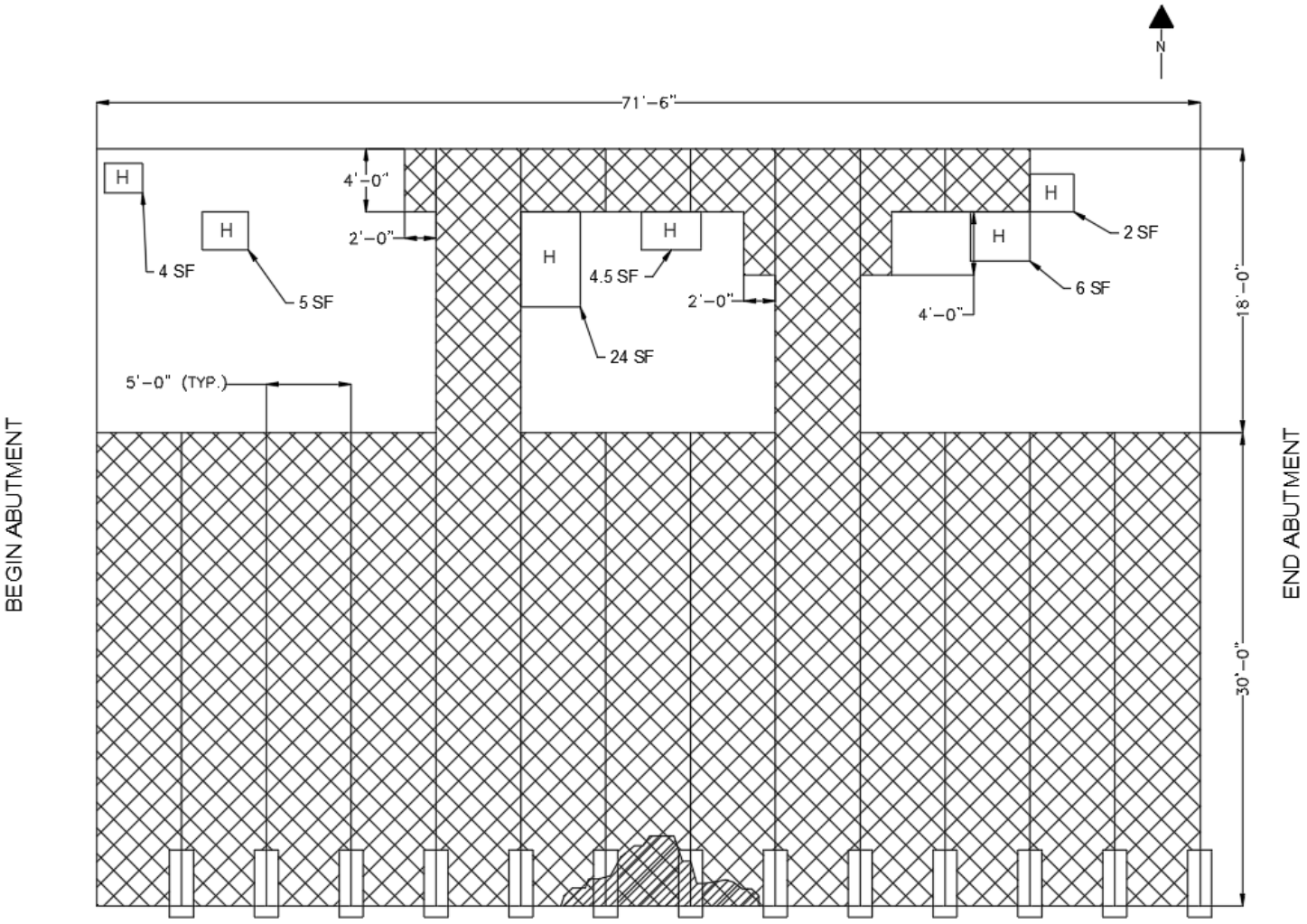
PHOTO: 14 **LOCATION:** Underside of deck 27 feet East of Begin abutment
DESCRIPTION: Underside of deck exhibits 24 SF Hollow area near North Fascia, Looking Northeast

PHOTO: 15 **LOCATION:** Under side of deck near Begin abutment and North fascia
DESCRIPTION: Underside of deck exhibits a 5 SF hollow area
Looking North

PHOTO: 16 **LOCATION:** Underside of North Fascia near End abutment
DESCRIPTION: Underside of fascia exhibits heavy efflorescence up to 14-inch
Looking Northeast

APPENDIX A

STRUCTURAL ARCH CONDITION



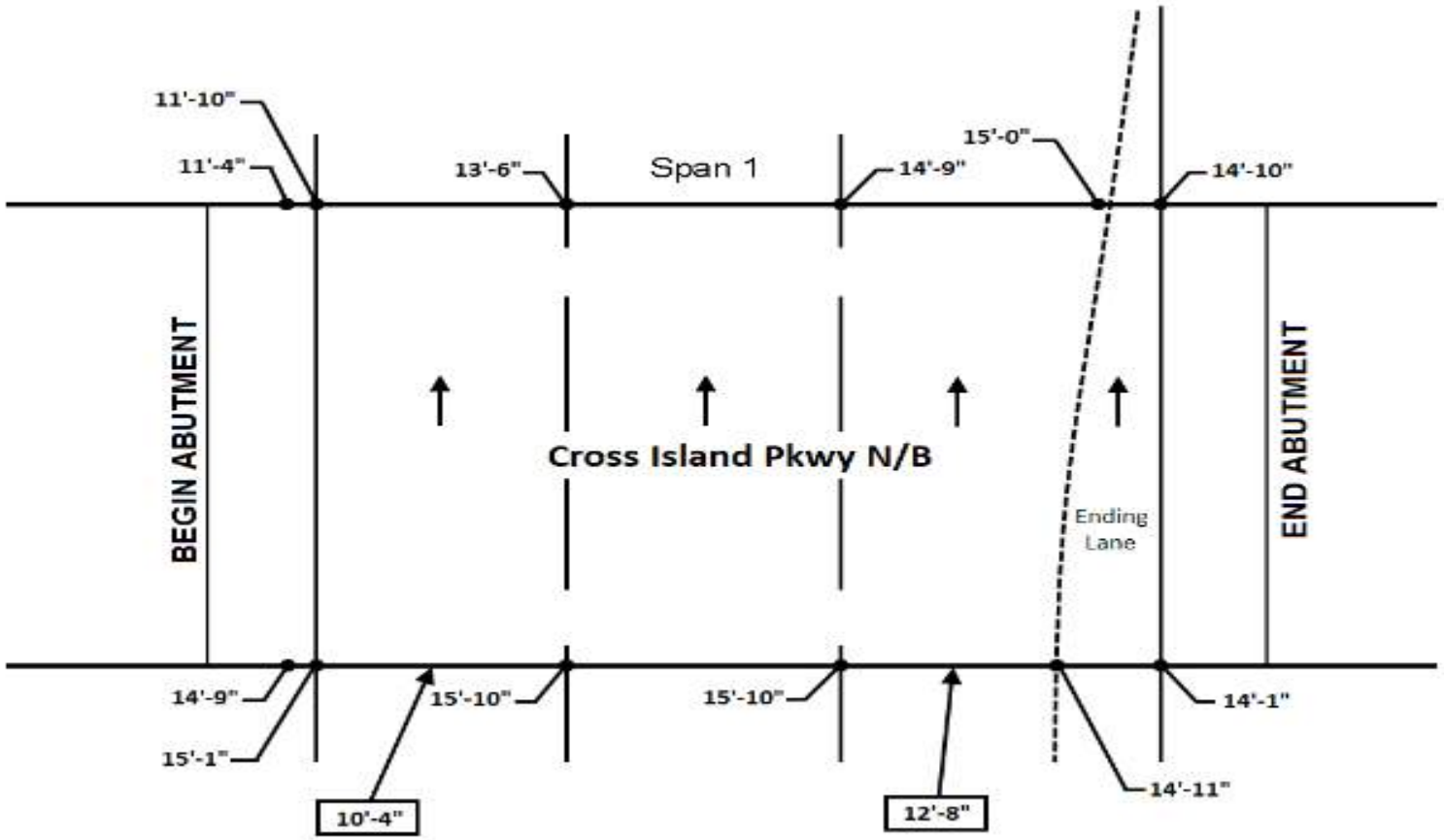
UNDERSIDE STEEL
FRAME SHIELDING

LEGEND:

H	HOLLOW SOUNDING CONCRETE	⌇	FINE CRACK
▨	SPALL	MC	MAPCRACKING
▩	STEEL MESH		

VERTICAL CLEARANCES

BIN 1076620

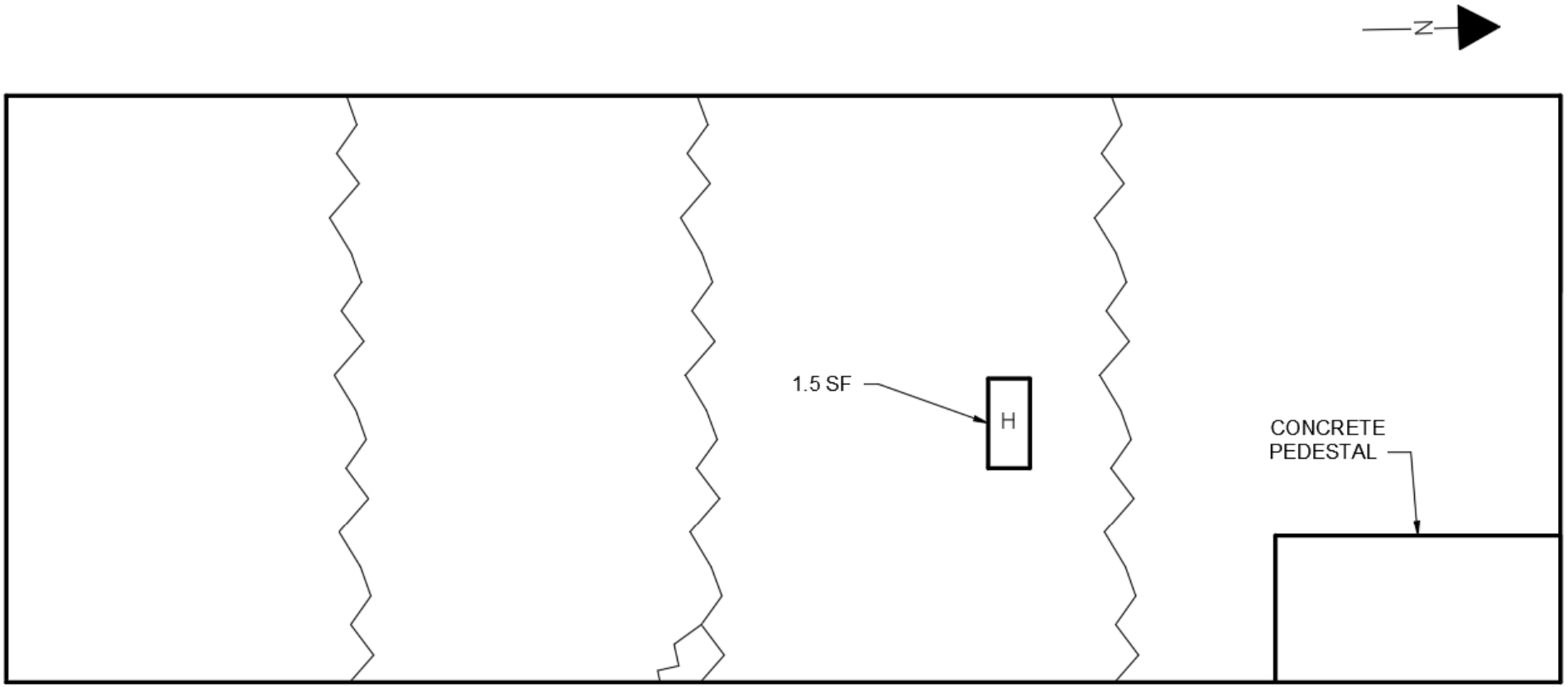


Vertical Clearance
(N.T.S)

Legend

Posting

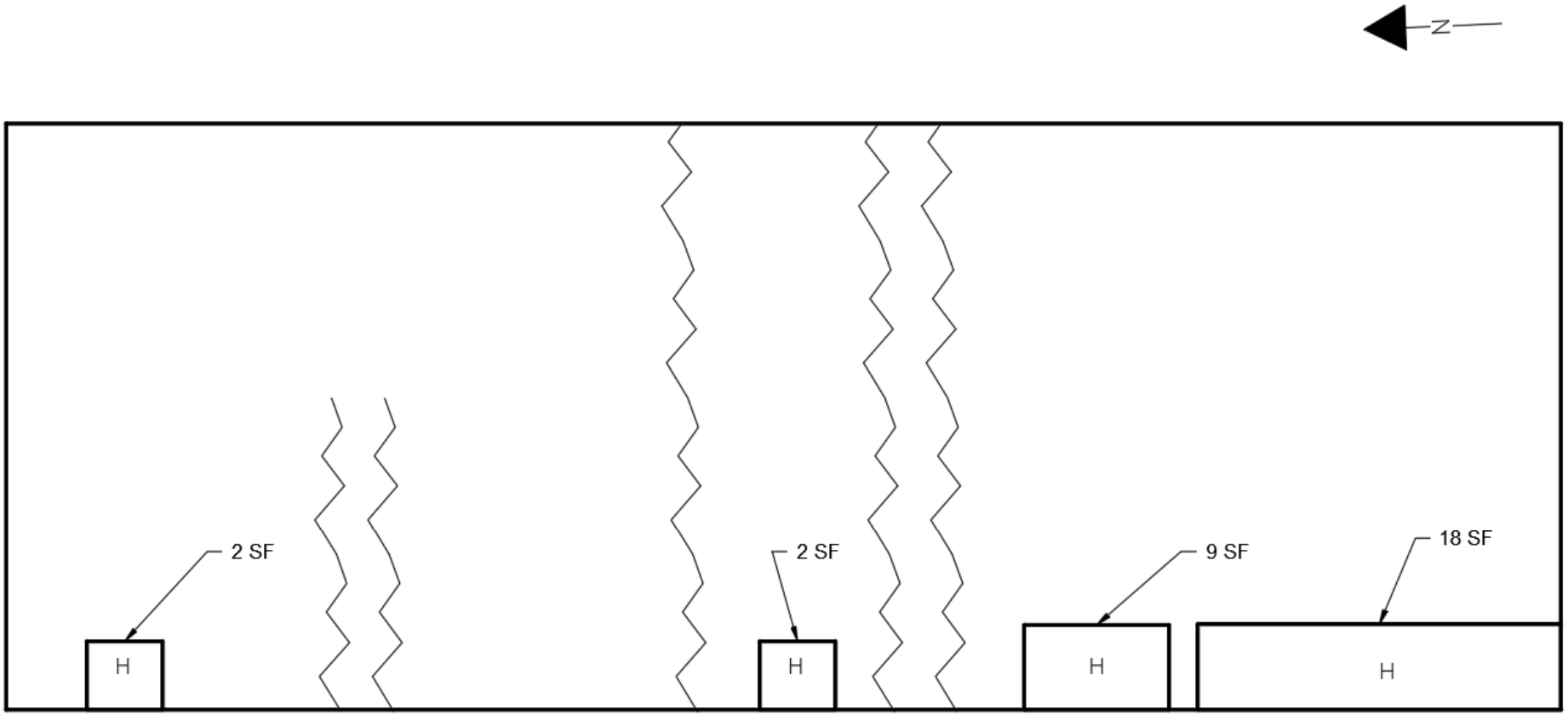
ABUTMENT CONDITION



BEGIN ABUTMENT

LEGEND:

- H — HOLLOW SOUNDING CONCRETE
- SPALL
- SPALL WITH EXPOSED REBAR
- FINE CRACK
- MC — MAPCRACKING



END ABUTMENT

LEGEND:

H	HOLLOW SOUNDING CONCRETE	⌇	FINE CRACK
▨	SPALL	MC	MAPCRACKING
▨	SPALL WITH EXPOSED REBAR		

APPENDIX B

LATEST BIENNIAL INSPECTION REPORT

REPORTING PROCEDURE

Condition State	Condition Type	Type General Condition Guideline
CS-1	Good	That portion of the element that has either no deterioration or the deterioration is insignificant to the management of the element, meaning that portion of the element has no condition based preventive maintenance needs or repairs. Areas of an element that have received long lasting structural repairs that restore the full capacity of the element with an expected life equal to the original element may be coded as good condition.
CS-2	Fair	That portion of the element that has minor deficiencies that signify a progression of the deterioration process. This portion of the element may need condition based preventive maintenance. Areas of the element that have received repairs that improve the element, but the repair is not considered equal to the original member may be coded as fair.
CS-3	Poor	That portion of the element that has advanced deterioration but does not warrant structural review. This portion of the element may need condition based preventative maintenance or other remedial action.
CS-4	Severe	That portion of the element that warrants a structural review to determine the effect on strength or serviceability of the element or bridge; OR a structural review has been completed and the defects impact strength or serviceability of the element or bridge; OR a condition where that portion of the element is no longer effective for its intended purpose.
CS-5	Unknown	That portion of the element not assessable due to lack of access.

New York State Department of Transportation
General Bridge Inspection Report

Inspection Date: January 19, 2022

Structure Information

BIN: **1076620**
Feature Carried: 907M 907MX5C13D03
Feature Crossed: 907A 907AX5M21128
Orientation: 2 - NORTHEAST
Region: 11 - NEW YORK CITY
County: QUEENS
Political Unit: City of NEW YORK
Approximate Year Built: 1972

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
General Type Main Span: 1 - Concrete, 07 - Frame
This Bridge is not a Ramp
Number of Spans: 1

Postings

Posted Load Matches Inventory: Yes
Posted Load in field: Not Posted
Posted Vertical Clearances Match Inventory: Yes
Inventory On: Not Posted
Inventory Under: 10 Feet 4 Inches

Number of Flags Issued

Red PIA: 0
Red: 0
Yellow: 0
Safety PIA: 0

New York State Inspection Overview

General Recommendation: 5

Federal NBI Ratings

NBI Deck Condition: 6
NBI Superstructure Condition: 6
NBI Substructure Condition: 6
NBI Channel Condition: N
NBI Culvert Condition: N

Action Items

Non-Structural Condition Observations noted: YES
Vulnerability Reviews Recommended: NO
Diving Inspection Requested: NO
Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Shahzad Hassan, P.E. 084559-1 *Date:* March 01, 2022
Review Signature: Muhammad Khan, P.E. 088118-1 *Date:* March 07, 2022
Processed by : Johnbull Bello, P.E. 084464-1 *Date:* March 15, 2022

Report Printed: April 18, 2022 10:46:10 AM

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

None

Improvements Observed

None

Pedestrian Fence Height

None

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

N - Bridge not over waterway.

Field Notes

Staff Present During Inspection		
Name	**Title**	**Organization**
Abdoulaye Gueye	ATL Trainee	Thornton Tomasetti
Shahed Khan	ATL	Thornton Tomasetti

General Equipment Required for Inspection*
Access Type
13 - Walking
19 - Up to 30 Foot Lift
29 - Lane Closure With Shadow Vehicle

*** For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.**

Detailed Time & Weather Conditions				
Field Date	**Arrival**	**Departure**	**Temp (F)**	**Weather Conditions**
01/18/2022	11:30 AM	01:30 PM	31	Party Cloudy
01/19/2022	11:30 AM	01:15 PM	35	Sunny

Inspection Times (hours)	
Time required for travel, inspection and report preparation	12
Lane closure usage	3
Railroad flagging time	No

Element Quantities

Element Assessment Summary Table							
Element	**Total Quantity**	**Unit**	**CS-1**	**CS-2**	**CS-3**	**CS-4**	**CS-5**
38 - Reinforced Concrete Slab	3913	SQUARE_FOOT	3116	782	15		0
215 - Reinforced Concrete Abutment	108	ft	104	4			0
220 - Reinforced Concrete Pile Cap/Footing	238	ft					238
321 - Reinforced Concrete Approach Slab	3620	SQUARE_FOOT	3256	314	50		0
334 - Masonry Bridge Railing	146	ft	73	48	25		0
510 - Wearing Surfaces	3450	SQUARE_FOOT	2902	498	50		0
800 - Erosion or Scour	238	ft	238				0
810 - Sidewalk	321	SQUARE_FOOT	289	32			0
811 - Curb	146	ft	132	14			0
853 - Wingwall	130	ft	89	41			0

Element Assessment by Span							
Element**	**Total Quantity**	**Unit**	**CS-1**	**CS-2**	**CS-3**	**CS-4**	**CS-5**
Span Number : 1							
BA215 - Reinforced Concrete Abutment	54	ft	52	2			0
BA220 - Reinforced Concrete Pile Cap/Footing	54	ft					54
BA321 - Reinforced Concrete Approach Slab	1320	SQUARE_FOOT	1187	132	1		0
BA800 - Erosion or Scour	54	ft	54				0
BW220 - Reinforced Concrete Pile Cap/Footing	58	ft					58
BW800 - Erosion or Scour	58	ft	58				0
BW853 - Wingwall	58	ft	53	5			0
EA215 - Reinforced Concrete Abutment	54	ft	52	2			0
EA220 - Reinforced Concrete Pile Cap/Footing	54	ft					54
EA321 - Reinforced Concrete Approach Slab	2300	SQUARE_FOOT	2069	182	49		0
EA800 - Erosion or Scour	54	ft	54				0
EW220 - Reinforced Concrete Pile Cap/Footing	72	ft					72
EW800 - Erosion or Scour	72	ft	72				0
EW853 - Wingwall	72	ft	36	36			0
38 - Reinforced Concrete Slab	3913	SQUARE_FOOT	3116	782	15		0
510 - Wearing Surfaces	3450	SQUARE_FOOT	2902	498	50		0

Element**	Total Quantity	Unit	CS-1	CS-2	CS-3	CS-4	CS-5
334 - Masonry Bridge Railing	146	ft	73	48	25		0
810 - Sidewalk	321	SQUARE_FOOT	289	32			0
811 - Curb	146	ft	132	14			0

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

1. The BIN plate is located on the Begin Abutment Stem at the left side and is in OK condition (Photo 1).
2. The reinforced concrete rigid frame has a concrete pavement on top of it without fill. Therefore, the concrete pavement is assessed as wearing surface. NBI Deck is rated based on the condition of the concrete wearing surface.
3. A minimum of 20% area of the underside of the concrete slab was sounded and all loose concrete was removed.
4. Stone ringstones and stone veneer at all Abutment Wingwalls were inspected and no loose stones were found.
5. Shielding Report is attached.
6. Vertical Clearance sketch is attached.
7. Standard Photos have been updated where appropriate.
8. Right side approach railing, missing pointing (photo 10).
9. Two NSCO was issued during this inspection.
10. Right and Left End Wingwalls exhibit vegetation growth (photo 9).

Element Condition Notes

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 38 - Reinforced Concrete Slab	3913	3116	782	15	0	0

Condition State 3 Note

Referenced Photo(s): 2, 3, 7, 11

Referenced Sketch(es): None

Span 1 primary member is a rigid frame is in fair condition. The underside is partly covered with steel wire mesh shielding. Approximately, 20% of the concrete in the exposed areas was sounded and no hollow sounding areas were found. The underside of the concrete frame above the steel wire mesh shielding appears to be in stable condition. There is a 7 SF x 1.5” deep spalled area on the right side with exposed corroded rebar near mid-span. The concrete around the spall and between the exposed rebar is stable (Photo 3). Underside of ringstones at both fascias exhibit heavy build-up of efflorescence and stalactite formation of ice from the water leakage (photo 7 and 11).

Additionally, several ringstones at both fascias in Span 1 exhibits spalls up to 4" (D) with cracks up to 1/4" (W). Area surrounding cracks and spalls are stable and sound solid (Photo 2).

For the steel wire mesh shielding condition, see Shielding Report and NSCO Report.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 38 - Reinforced Concrete Slab-510 - Wearing Surfaces	3450	2902	498	50	0	0

Condition State 3 Note

Referenced Photo(s): 4

Referenced Sketch(es): None

The reinforced concrete rigid frame has a concrete pavement on top of it without fill. Therefore, the concrete pavement is assessed as wearing surface. NBI Deck is rated based on the condition of the concrete wearing surface.

Span 1 wearing surface exhibits transverse cracks up to 1/8” wide at both lanes near the Begin abutment. There are two 1 SF uneven asphalt patched areas. Overall, it is in fair condition and the riding quality is good.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA321 - Reinforced Concrete Approach Slab	1320	1187	132	1	0	0

Condition State 3 Note

Referenced Photo(s): 5

Referenced Sketch(es): None

The Begin Approach Slab exhibits a 1 SF area of uneven asphalt patching in the center lane. Also, the construction joint exhibits slight deterioration of the sealer material, however, the riding quality is good.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: EA321 - Reinforced Concrete Approach Slab	2300	2069	182	49	0	0

Condition State 3 Note

Referenced Photo(s): 5

Referenced Sketch(es): None

The End Approach Slab exhibits two 1/2 SF x up to 1" deep spalls (partially patched with asphalt) near the End abutment and a 1/2 SF x 1” deep spall at the end of the end approach slab, all near the center of the roadway. Also, near the end of the End approach slab there is a full width x up to 1/8” wide transverse crack.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 334 - Masonry Bridge Railing	146	73	48	25	0	0

Condition State 3 Note

Referenced Photo(s): 6

Referenced Sketch(es): None

The interior face of the right masonry bridge railing near the Begin is missing approximately 25% of its pointing for a length of 25 LF (photo 6).

Non-Structural Condition Observations

Category: OTHER -Under Deck Shielding Quantity: 124 Unit: sqft

Referenced Element(s): NONE

Referenced Photo(s): 3,7,11
Referenced Sketch(es): 4,5

The underside of Span 1 is covered with wire mesh shielding on the right two thirds of the bridge. The wire mesh shielding is attached to the underside of the concrete rigid frame by transverse steel supports, typically spaced 5'-6" on center.

The wire mesh shielding and steel supports exhibit minor surface corrosion, but are mostly secured in place. However, all the steel shielding supports along the right edge exhibit heavy corrosion and pack-rusted components for up to 5' long with various locations of detached mesh shielding up to 5.2' long for approximately 124 SF total.

There is a hole in the wire mesh netting by Begin abutment, measuring approximately 2 SF. This is a new condition.

This is a previous NSCO with one new condition noted as mentioned above.

Category: APPROACH - Railing Quantity: 50 Unit: ft

Referenced Element(s): NONE

Referenced Photo(s): 8
Referenced Sketch(es): 2

Approximately 60' from the End Abutment, the right box beam guide railing exhibits nine consecutive disconnected posts of which three are bent and approximately 50' length of the horizontal rail is unsupported. Additionally, two more posts in the vicinity are also disconnected from the beam rail (Photo 8). There is no immediate safety hazard for this condition at this time.

The remaining guide railings in the approaches are in good condition. This is a previous NSCO.

Inspection Photographs

Attachment Description:
Location: Begin Abutment, Left Side; Looking Back.
BIN Plate in OK condition.
Ref. General Comments.

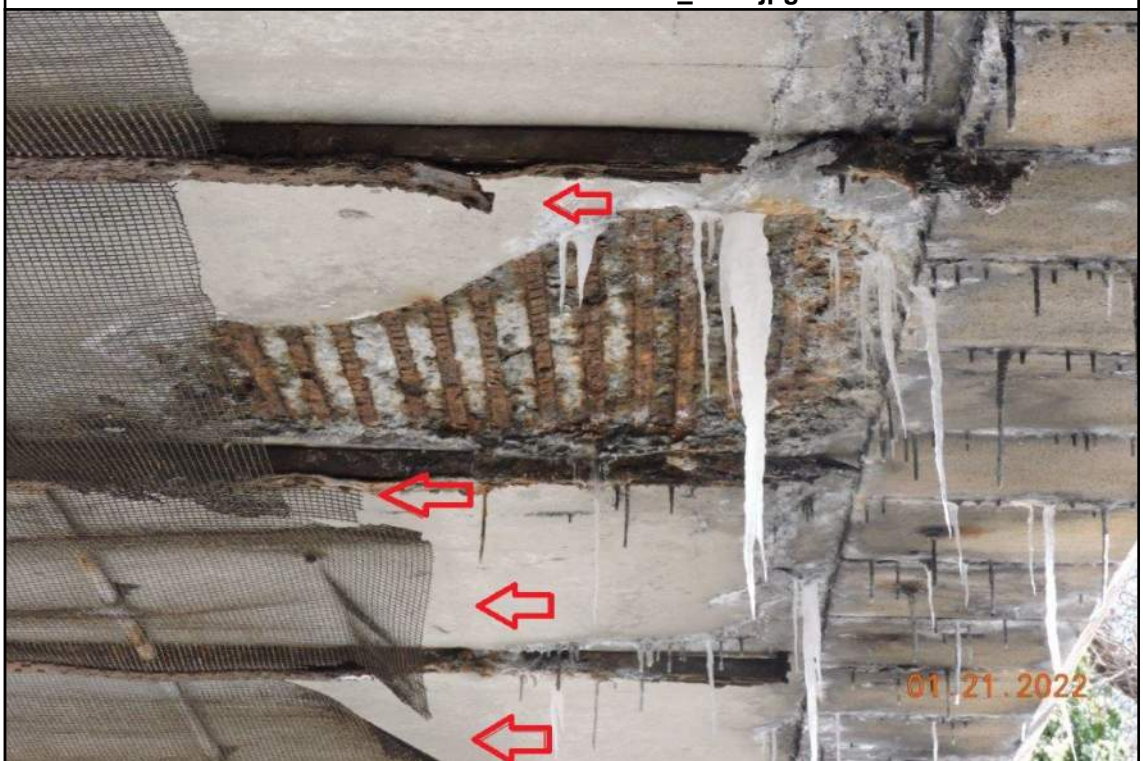
Photo Number: **1** Photo Filename: **22SH0121_6624.jpg**

Attachment Description:
Location: Right Fascia Ringstones, near Begin Abutment; Looking Left
Spalls in ringstones.

Photo Number: **2** Photo Filename: **22SH0121_6626.jpg**

Attachment Description:
Location: Span 1 Underside of concrete slab, mid-span, right side; Looking Up and Ahead. Spall with exposed corroded rebar and hanging wire mesh. Ref. NSCO issued for deteriorated wire mesh.

Photo Number: **3** Photo Filename: **22SH0121_6629.jpg**



Attachment Description:
Location: Span 1 Wearing Surface; Looking Right. Transverse cracks and uneven asphalt patches.

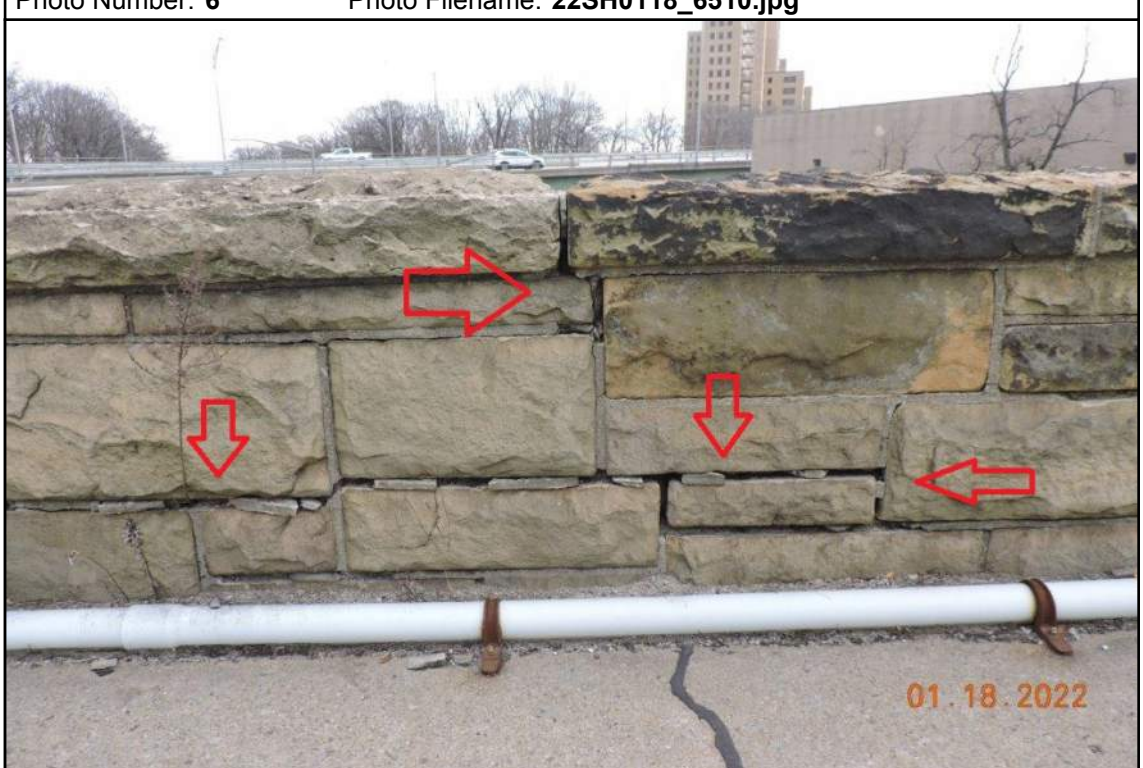
Photo Number: **4** Photo Filename: **22SH0118_6514.jpg**

Attachment Description:
Location: End Approach construction joint; Looking Right. Uneven asphalt patches. (Typical)

Photo Number: **5** Photo Filename: **22SH0118_6513.jpg**

Attachment Description:
Location: Span 1 Right Masonry Bridge Railing near Begin Abutment; Looking Right. Missing pointing.

Photo Number: **6** Photo Filename: **22SH0118_6510.jpg**



Attachment Description: Location: Span 1, Underside of Deck, Right side; Looking Left & Ahead. Deteriorated wire mesh shielding supports, a hole in the mesh wire and efflorescence build-up. Ref. Shielding Report and NSCO.	Photo Number: **7** Photo Filename: **22SH0121_6620.jpg** 

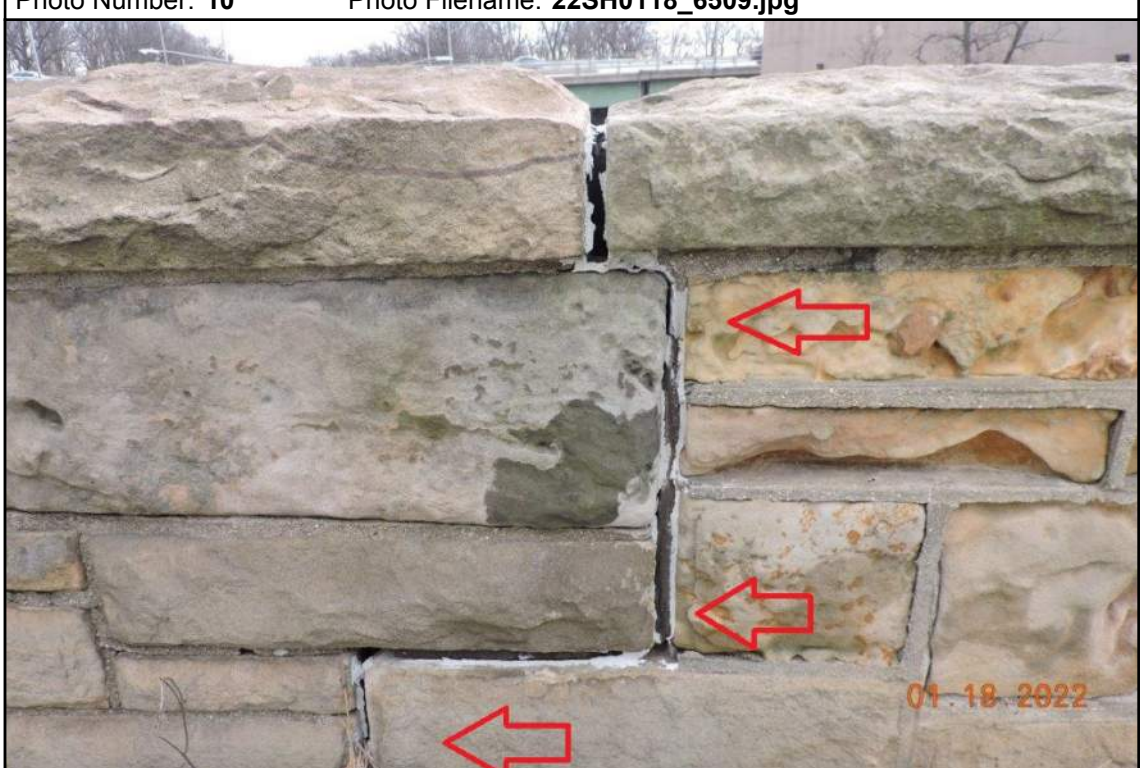
Attachment Description: Location: Beyond End Approach, Right side railing; Looking Ahead. Guardrail with disconnected posts. Ref. NSCO issued for a potential safety hazards for errant vehicles.	Photo Number: **8** Photo Filename: **22SH0118_6511.jpg** 

Attachment Description:
Location: Right End Wingwall, vegetation growth, looking toward End Left (typical).

Photo Number: **9** Photo Filename: **22SH0121_6622.jpg**

Attachment Description:
Location: Right side Begin approach railing, missing pointing, looking right

Photo Number: **10** Photo Filename: **22SH0118_6509.jpg**

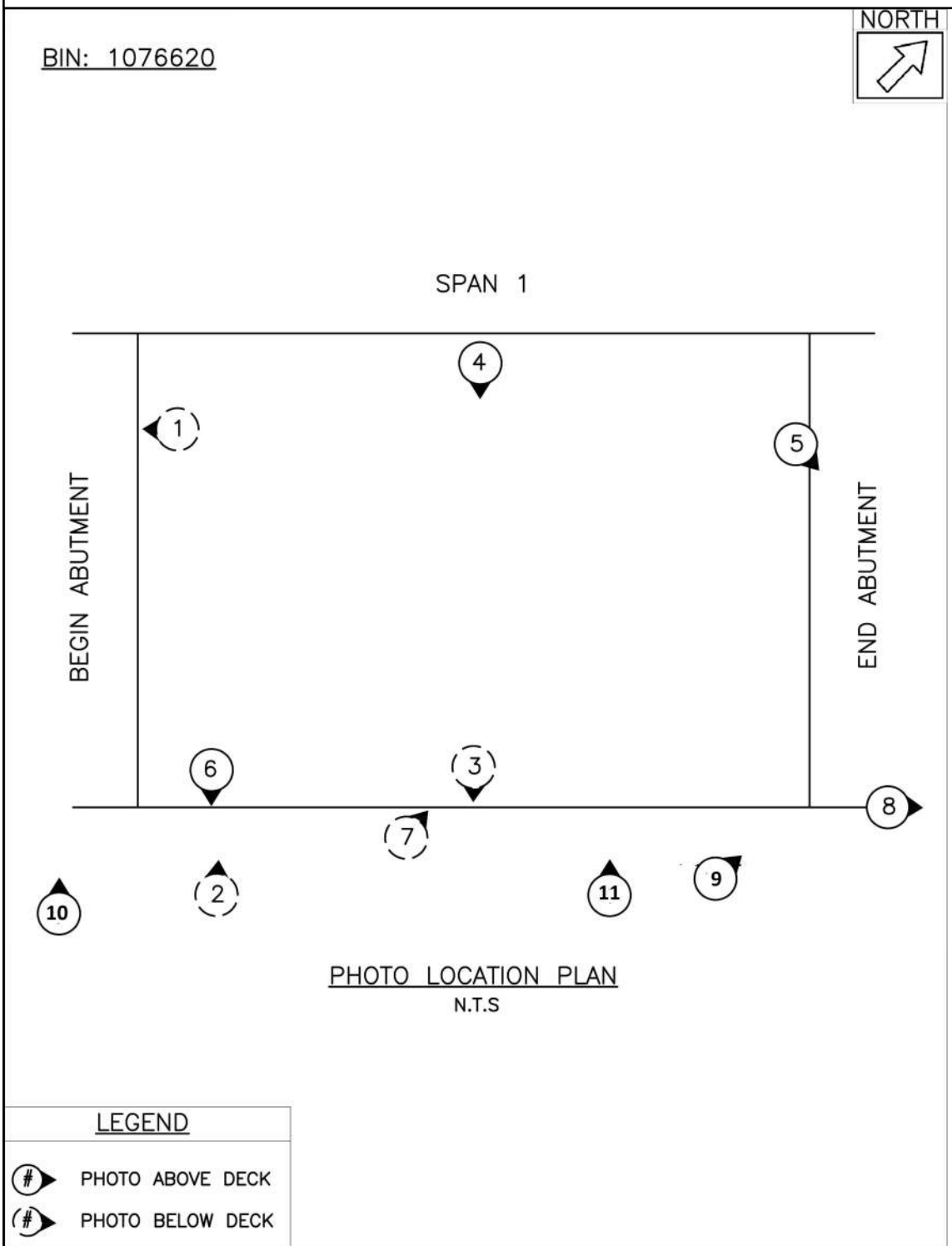


Attachment Description:
Location: Span 1 Right railing, water leaking from missing pointing areas and deteriorated wire mesh, looking toward End Left. Ref. NSCO issued for deteriorated wire mesh

Photo Number: **11** Photo Filename: **22SH0121_6609.jpg**

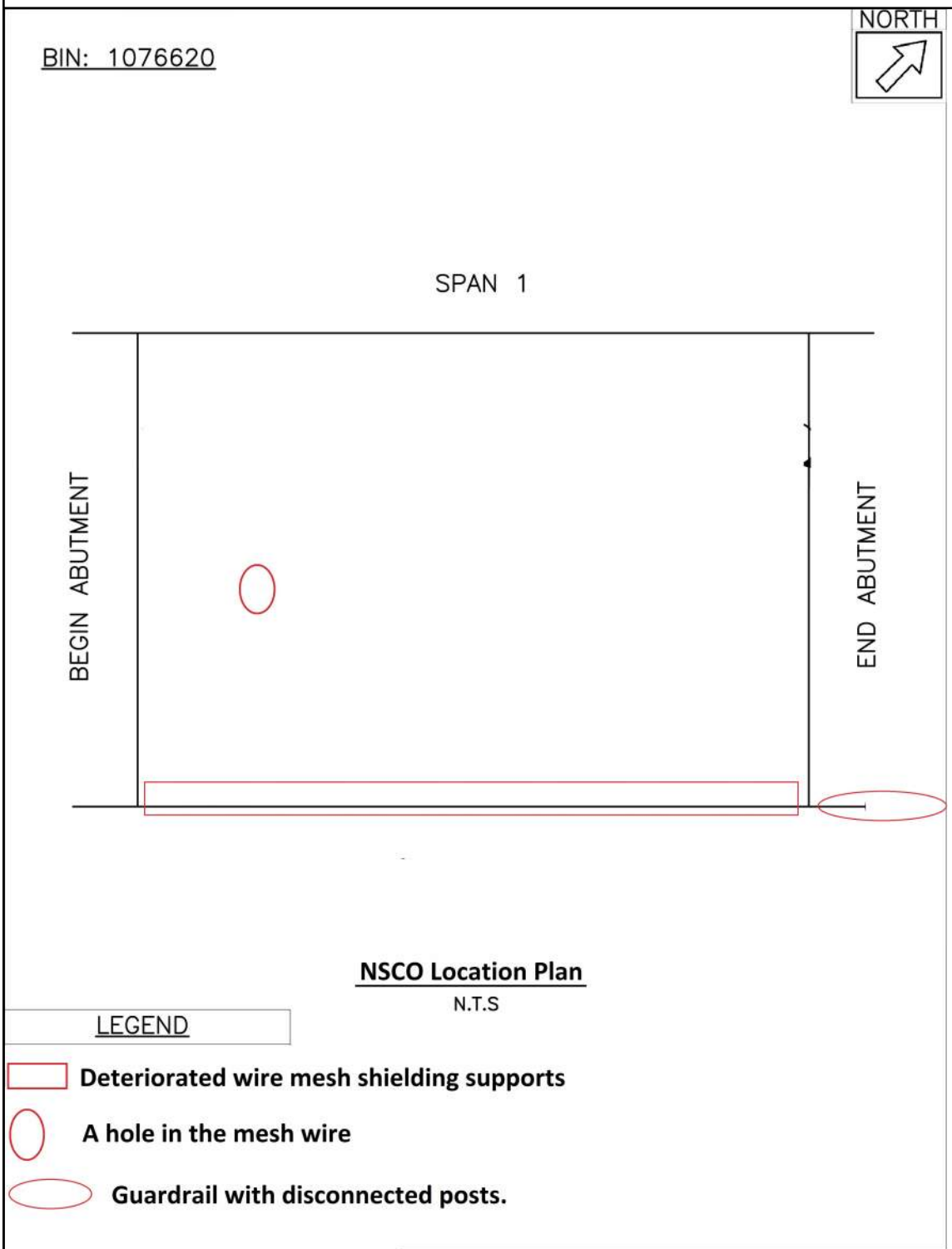
Inspection Sketches

Sketch Number: **1** Sketch Filename: **22 Photo Location Plan.jpg**



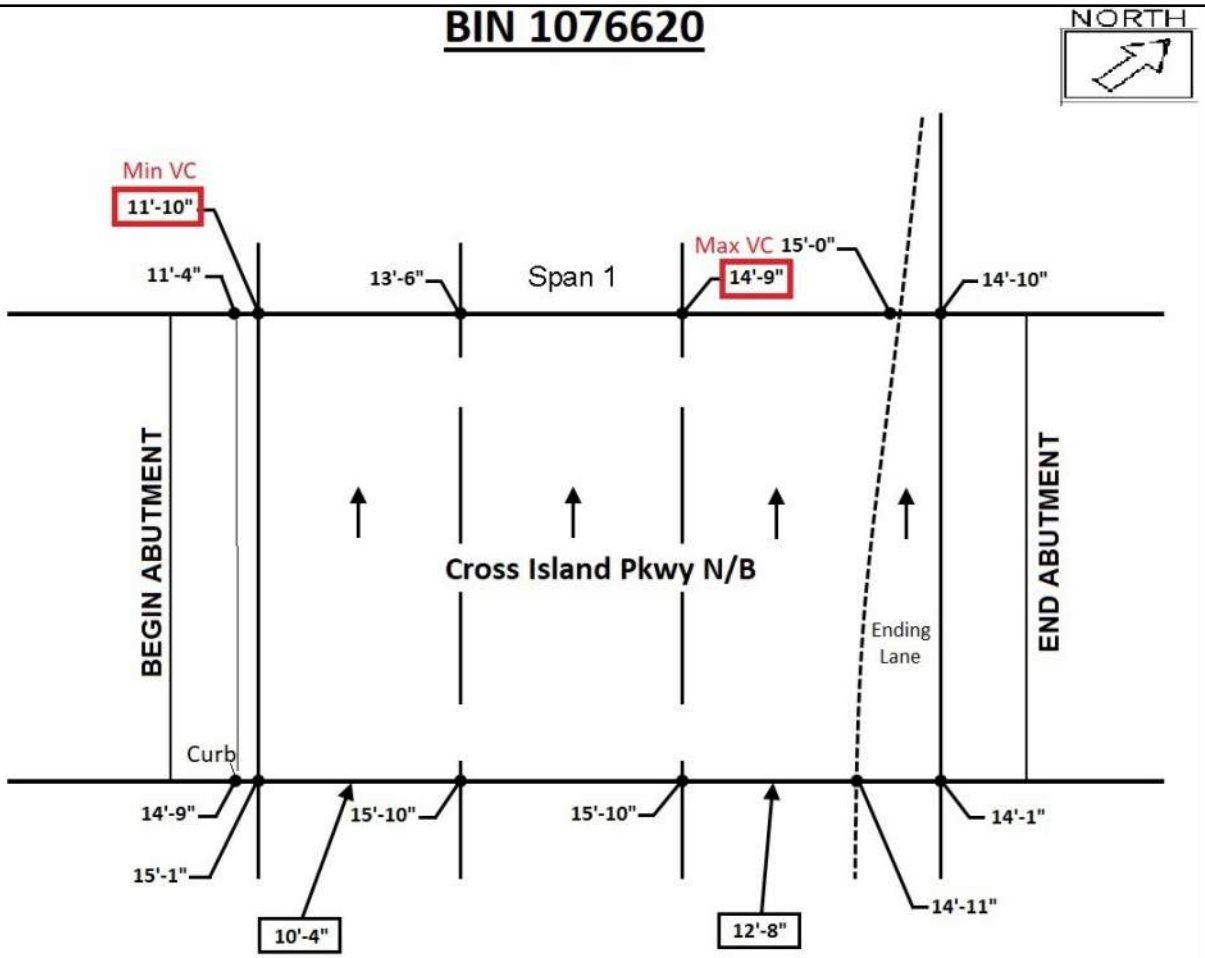
Sketch Description: 22 Photo Location Plan

Sketch Number: **2** Sketch Filename: **22 NSCO Location Plan.jpg**



Sketch Description: 22 NSCO Location Plan

Sketch Number: **3** Sketch Filename: **22 Vertical Clearances Plan.jpg**



Vertical Clearances

N.T.S.

Legend

Posting

Sketch Description: 22 Vertical Clearances Plan

Sketch Number: **4** Sketch Filename: **22_BIN1076620_ShieldingReport P1.jpg**

BD 288 (4/95)

BIN 1076620

NYS DEPT. OF TRANSPORTATION
BRIDGE INSPECTION REPORT
SHEET 1 OF 2

TEAM LEADER: Shahzad Hassan, P.E **ASST. TEAM LEADER:** Shahed Khan **DATE** 01/19/2022

Feature Carried: 907M 907MX5C13D03

Feature Crossed: 907A 907AX5M21128

UNDERDECK SHIELDING INSPECTION

SPAN(S)	SQ. FEET TOT. AREA / NET AREA	SHIELDING TYPE	PHOTO NUMBER	SKETCH PAGE	HARDWARE QUANTITY
1	2345	Wire Mesh Netting	3, 7, 11		

MIN. VERTICAL CLEARANCE AS RECORDED IN THE INVENTORY IS 11 FT. 10 IN.

DOES THE VERTICAL CLEARANCE TO THE LOW POINT OF THE NETTING COMPROMISE THE MINIMUM VERTICAL CLEARANCE? YES NO X (IF YES, THEN THE ACTUAL MINIMUM VERTICAL CLEARANCE MEASURED TO THE LOW POINT OF THE NETTING IS FT. IN. AT SPAN)

IS THERE ANY DEBRIS ON THE SHIELD? YES NO X (IF YES, REFER TO SKETCH ON PAGE AND PHOTO .

DOES THE DEBRIS POSE A POSSIBILITY OF SHIELDING FAILURE?

TIMBER PLANKING

> IS TIMBER IN GOOD CONDITION? (IF NO REFER TO SKETCH ON PAGE AND PHOTO

WELDED WIRE MESH / NYLON NETTING (INCLUDES "HANDS-ON" INSPECTION OF 10% / 5% (MIN.) RESPECTIVELY OF THE ATTACHING HARDWARE).

ARE THERE ANY HOLES, RIPS, OR TEARS IN MESHING/NETTING THAT MIGHT ALLOW DEBRIS TO FALL THROUGH? YES NO X (IF YES, REFER TO SKETCH ON PAGE AND PHOTO .

ARE THERE ANY PROBLEMS WITH THE SUPPORTING/ANCHORING HARDWARE? YES NO (IF YES, REFER TO SKETCH ON PAGE AND PHOTO).

COMMENT The wire mesh shielding is attached to the underside of the concrete rigid frame by transverse steel Supports, typically space 5′ 6″ on center. The wire mesh shielding and steel supports exhibits exhibit minor surface corrosion, but mostly secured in place. However, all the steel shielding supports along the right edge exhibit heavy corrosion and pack-rusted components for up to 5′ long.

These locations exhibits detached mesh shielding up to 6′ long for approximately 124 SF area in total.

There is a hole in the wire mesh netting by Begin abutment, measuring approximately 2 SF.

A NSCO report was issued for the above conditions.

RECOMMENDATIONS (REMOVE/REPLACE/REPAIR/MAINTAIN/NO ACTION.)

Repair steel shielding supports on the right sides and hole in the wire mesh netting. See sketch for locations.

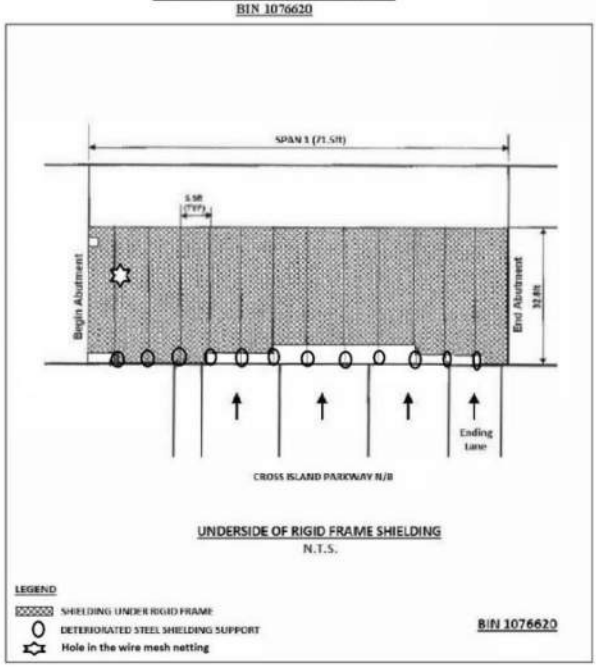
Sketch Description: 22_BIN1076620_ShieldingReport P1

Sketch Number: **5** Sketch Filename: **22_BIN1076620_ShieldingReport P2.jpg**

Deck underside Shielding Sketch

BIN 1076620 **SHEET 2 OF 2**

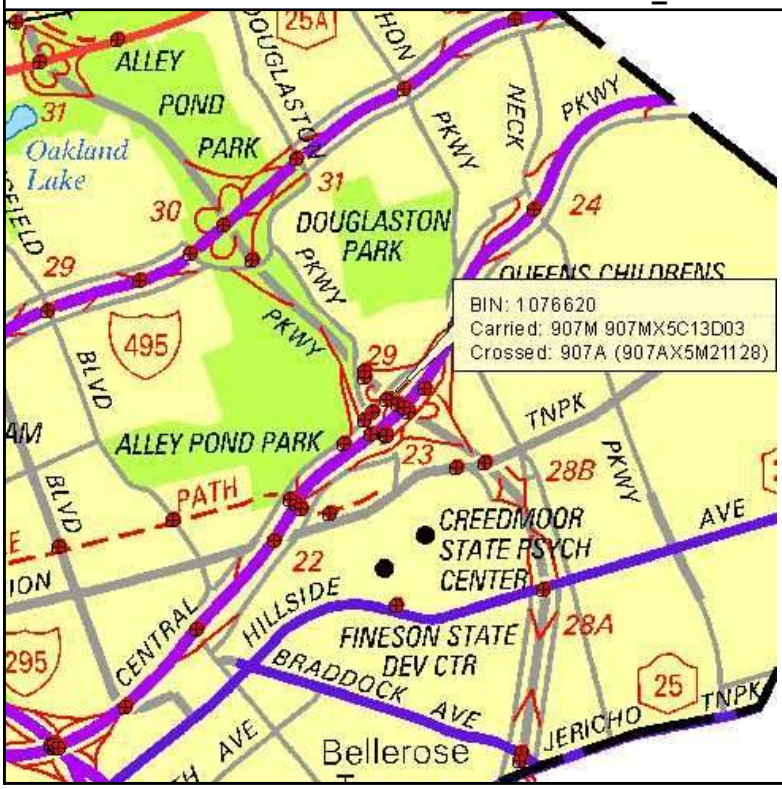
UNDERDECK SHIELDING REPORT



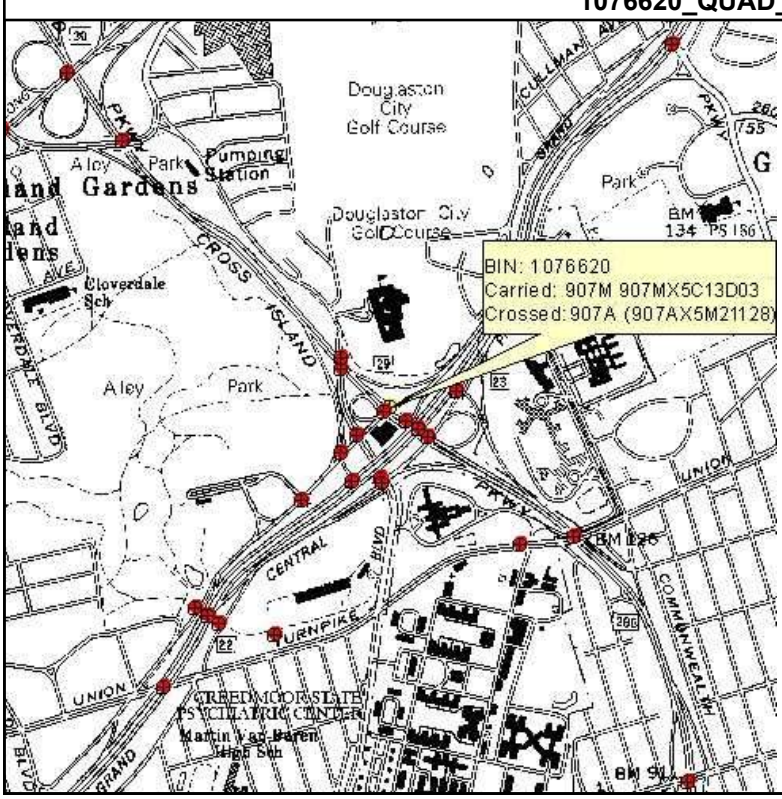
Sketch Description: 22_BIN1076620_ShieldingReport P2

Standard Photographs

1076620_LOCATION_MAP.JPG



1076620_QUAD_MAP.JPG



AbutmentBegin.JPG

AbutmentEnd.JPG

ApproachBegin.JPG

ApproachEnd.JPG

ElevationLeft.JPG

ElevationRight.JPG

F2CrossedLeft.JPG

F2CrossedRight.JPG

FramingSpan1.JPG

VCF2CrossedRight1.JPG

VCF2CrossedRight2.JPG